



## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/669,162A  
Source: 5/1 FWO  
Date Processed by STIC: 5/9/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221

Effective 12/13/03: TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efb/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/03):  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03

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# Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/669,162A
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1 _____ Wrapped Nucleics _____ Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."	
2 _____ Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.	
3 _____ Misaligned Amino _____ Numbering	The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.	
4 _____ Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.	
5 <input checked="" type="checkbox"/> Variable Length	Sequence(s) <u>6, 7, 8, 9</u> contain h's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.	
6 _____ PatentIn 2.0 _____ "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.	
7 _____ Skipped Sequences _____ (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped  Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.	
8 _____ Skipped Sequences _____ (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000	
9 _____ Use of n's or Xaa's _____ (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.	
10 _____ Invalid <213> _____ Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence	
11 _____ Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)	
12 _____ PatentIn 2.0 _____ "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.	
13 _____ Misuse of n/Xaa	"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid	

AMC - Biotechnology Systems Branch - 09/09/2003

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IFWL

## RAW SEQUENCE LISTING

DATE: 05/07/2004

PATENT APPLICATION: US/10/669,162A

TIME: 14:10:39

Input Set : A:\250060016U2.txt

Output Set: N:\CRF4\05072004\J669162A.raw

3 <110> APPLICANT: Breaker, Ronald R.  
 4 Nahvi, Ali  
 5 Sudarsan, Narasimhan  
 6 Ebert, Margaret S.  
 7 Winkler, Wade  
 8 Barrick, Jeffrey E.  
 9 Wickiser, John K.  
 11 <120> TITLE OF INVENTION: RIBOSWITCHES, METHODS FOR THEIR USE, AND  
 12 COMPOSITIONS FOR USE WITH RIBOSWITCHES  
 14 <130> FILE REFERENCE: 25006.0016U2  
 16 <140> CURRENT APPLICATION NUMBER: 10/669,162A  
 17 <141> CURRENT FILING DATE: 2003-09-22  
 19 <150> PRIOR APPLICATION NUMBER: 60/412,468  
 20 <151> PRIOR FILING DATE: 2002-09-20  
 22 <160> NUMBER OF SEQ ID NOS: 377  
 24 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 202  
 28 <212> TYPE: RNA  
 29 <213> ORGANISM: Escherichia coli  
 31 <400> SEQUENCE: 1  
 32 gccgguccug ugaguuaua gggaauccag ugcgaaucug gagcugacgc gcagcgguaa 60  
 33 ggaaaggugc gaugauugcg uuaugcggac acugccauuc ggugggaagu caucaucucu 120  
 34 uaguaucuaa gauacccuc caagcccga gaccugccgg ccaacgucgc aucugguucu 180  
 35 caucaucgcg uauauugau ga 202  
 37 <210> SEQ ID NO: 2  
 38 <211> LENGTH: 165  
 39 <212> TYPE: RNA  
 40 <213> ORGANISM: Escherichia coli  
 42 <220> FEATURE:  
 43 <221> NAME/KEY: misc\_feature  
 44 <222> LOCATION: 155  
 45 <223> OTHER INFORMATION: r = a or g  
 47 <220> FEATURE:  
 48 <221> NAME/KEY: misc\_feature  
 49 <222> LOCATION: 157  
 50 <223> OTHER INFORMATION: y = c or (t/u)  
 52 <400> SEQUENCE: 2  
 53 ggaaccaaac gacucggggg gcccucucg gugaaggcug agaaauaccc guaucaccug 60  
 54 aucuggauaa ugccagcgua gggaagucac ggaccaccag gucauugcu cuucacguua 120  
 55 uggcaggagc aaacuaugca agucgaccug cuggruycag cgcaa 165  
 57 <210> SEQ ID NO: 3  
 58 <211> LENGTH: 240

pg 1-7

u only. † cannot appear in an RNA sequence.

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TIME: 14:10:39

Input Set : A:\250060016U2.txt

Output Set: N:\CRF4\05072004\J669162A.raw

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59 <212> TYPE: RNA
60 <213> ORGANISM: Escherichia coli
62 <220> FEATURE:
63 <221> NAME/KEY: misc_feature
64 <222> LOCATION: (155)...(240)
65 <223> OTHER INFORMATION: n = g, a, c, or t/u
67 <400> SEQUENCE: 3
68 ggaauugcccc auuugcgggg cuaauuucuu gucggagugc cuuaacuggc ugagacoguu 60
69 uauucgggau ccgcgggaacc ugauccaggu aaauccugcg aagggaaaca gaguuaauuc 120
-> 70 gcuauccgau cgccccugcg gcgaucgucu cuugnnnnnn nnnnnnnnnn nnnnnnnnnn 180
71 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240
73 <210> SEQ ID NO: 4
74 <211> LENGTH: 165
75 <212> TYPE: RNA
76 <213> ORGANISM: Escherichia coli
78 <220> FEATURE:
79 <221> NAME/KEY: misc_feature
80 <222> LOCATION: 65, 74, 107, 130
81 <223> OTHER INFORMATION: s = g or c
83 <220> FEATURE:
84 <221> NAME/KEY: misc_feature
85 <222> LOCATION: 25, 26, 34, 35, 64, 75, 106, 131
86 <223> OTHER INFORMATION: w = a or t/u
88 <400> SEQUENCE: 4
89 ggaaccaaac gacucggggg gcccwucugc gugwggcgug agaaauaccc guaucaccug 60
90 aucwsgauaa ugcswgcgua gggaagucac ggaccaccag gucauwscuu cuucacguua 120
91 uggcaggags waacuaugca agucgaccug cuggauccag cgcaa 165
93 <210> SEQ ID NO: 5
94 <211> LENGTH: 176
95 <212> TYPE: RNA
96 <213> ORGANISM: Artificial Sequence
98 <220> FEATURE:
99 <223> OTHER INFORMATION: Description of Artificial Sequence:/Note =
100     synthetic construct
102 <220> FEATURE:
103 <221> NAME/KEY: misc_feature
104 <222> LOCATION: (39)...(156)
105 <223> OTHER INFORMATION: n = g, a, c or t/u
107 <400> SEQUENCE: 5
-> 108 ggauauagc cguagguugc gaaagcgacc cugaguagnn nnnnncaaga gaagcagagg 60
109 gacuggcccg acgaagcuuc agcaaccggu guaauggcga ucagccauga ccaaggugcu 120
110 aaauccagca agcucgaaca gcuuggaagn nnnnnncgaa acgguagcga gagcuc 176
113 <210> SEQ ID NO: 6
114 <211> LENGTH: 97
115 <212> TYPE: RNA
116 <213> ORGANISM: Artificial Sequence
118 <220> FEATURE:
119 <223> OTHER INFORMATION: Description of Artificial Sequence:/Note =
120     synthetic construct

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## RAW SEQUENCE LISTING

DATE: 05/07/2004

PATENT APPLICATION: US/10/669,162A

TIME: 14:10:39

Input Set : A:\250060016U2.txt

Output Set: N:\CRF4\05072004\J669162A.raw

122 <220> FEATURE:  
 123 <221> NAME/KEY: misc\_feature  
 124 <222> LOCATION: 1, 6, 26, 58, 66, 76, 97  
 125 <223> OTHER INFORMATION: n = a variable number of any nucleotide  
 127 <220> FEATURE:  
 128 <221> NAME/KEY: misc\_feature  
 129 <222> LOCATION: 5, 7, 8, 11, 12, 18-20, 24, 25, 29, 30, 33-35, 38, 40, 41,  
 130 47, 50, 54-56, 59, 60, 75, 77-79, 85, 89, 93  
 131 <223> OTHER INFORMATION: n = g, a, c or t/u  
 133 <220> FEATURE:  
 134 <221> NAME/KEY: misc\_feature  
 135 <222> LOCATION: 27, 36, 48, 53, 57, 80, 87  
 136 <223> OTHER INFORMATION: r = a or g  
 138 <220> FEATURE:  
 139 <221> NAME/KEY: misc\_feature  
 140 <222> LOCATION: 67, 83  
 141 <223> OTHER INFORMATION: y = c or t/u  
 143 <400> SEQUENCE: 6  
 > 144 nggunnnnaa nngggaannn ggunnrrann cccnnrcngn ncccgcncn guinnrrnn 60  
 145 cacugnyggg aaggnnnnnr agcnggrana cngccn 97  
 147 <210> SEQ ID NO: 7  
 148 <211> LENGTH: 56  
 149 <212> TYPE: RNA  
 150 <213> ORGANISM: Artificial Sequence  
 152 <220> FEATURE:  
 153 <223> OTHER INFORMATION: Description of Artificial Sequence:/Note =  
 154 synthetic construct  
 156 <220> FEATURE:  
 157 <221> NAME/KEY: misc\_feature  
 158 <222> LOCATION: 7, 50  
 159 <223> OTHER INFORMATION: d = g, a or (u)  
 161 <220> FEATURE:  
 162 <221> NAME/KEY: misc\_feature  
 163 <222> LOCATION: 1, 8, 15, 36, 56  
 164 <223> OTHER INFORMATION: n = a variable number of any nucleotide  
 166 <220> FEATURE:  
 167 <221> NAME/KEY: misc\_feature  
 168 <222> LOCATION: 2-5, 17-20, 21-24, 30-34, 38-40, 41-43, 45-47  
 169 <223> OTHER INFORMATION: n = g, a, c or t/u  
 171 <220> FEATURE:  
 172 <221> NAME/KEY: misc\_feature  
 173 <222> LOCATION: 54  
 174 <223> OTHER INFORMATION: r = a or g  
 177 <400> SEQUENCE: 7  
 > 178 nnnngdncu gaganannnn nnnnaccugn nnnncunnnn nnnngnnnagd aggran 56  
 180 <210> SEQ ID NO: 8  
 181 <211> LENGTH: 97  
 182 <212> TYPE: RNA  
 183 <213> ORGANISM: Artificial Sequence

variable length not permitted  
 (see item 5 on  
 Error  
 Summary  
 sheet)

see item 5 on Error Summary  
 sheet

## RAW SEQUENCE LISTING

DATE: 05/07/2004

PATENT APPLICATION: US/10/669,162A

TIME: 14:10:39

Input Set : A:\250060016U2.txt

Output Set: N:\CRF4\05072004\J669162A.raw

185 <220> FEATURE:  
 186 <223> OTHER INFORMATION: Description of Artificial Sequence:/Note =  
 187 synthetic construct  
 189 <220> FEATURE:  
 190 <221> NAME/KEY: misc\_feature *u*  
 191 <222> LOCATION: 57, 62  
 192 <223> OTHER INFORMATION: k = g or *t/u*  
 194 <220> FEATURE:  
 195 <221> NAME/KEY: misc\_feature *item 5*  
 196 <222> LOCATION: 37, 47  
 197 <223> OTHER INFORMATION: n = a variable number of any nucleotide  
 199 <220> FEATURE:  
 200 <221> NAME/KEY: misc\_feature  
 201 <222> LOCATION: 11, 17, 20, 28, 36, 46, 48, 58, 61, 77-79  
 202 <223> OTHER INFORMATION: n = g, a, c or *t/u* *u*  
 204 <220> FEATURE:  
 205 <221> NAME/KEY: misc\_feature  
 206 <222> LOCATION: 6, 35, 43, 54, 59, 65-68, 74, 90, 91, 95-97  
 207 <223> OTHER INFORMATION: r = a or g  
 209 <220> FEATURE:  
 210 <221> NAME/KEY: misc\_feature  
 211 <222> LOCATION: 1-3, 15, 31, 40, 44, 51-53, 64, 84  
 212 <223> OTHER INFORMATION: y = c or *t/u* *u*  
 214 <400> SEQUENCE: 8  
 -> 215 ~~yyyucgggc~~ ngggygnaa uccnaccgg yggurnnag yccrygnnga yyyrguknra 60  
 216 nkcyrrrrcc gacrgunnna gucyggaugr ragarr 97  
 218 <210> SEQ ID NO: 9  
 219 <211> LENGTH: 86  
 220 <212> TYPE: RNA  
 221 <213> ORGANISM: Artificial Sequence  
 223 <220> FEATURE:  
 224 <223> OTHER INFORMATION: Description of Artificial Sequence:/Note =  
 225 synthetic construct  
 227 <220> FEATURE:  
 228 <221> NAME/KEY: misc\_feature *item 5*  
 229 <222> LOCATION: 52, 72  
 230 <223> OTHER INFORMATION: n = a variable number of any nucleotide  
 232 <220> FEATURE:  
 233 <221> NAME/KEY: misc\_feature  
 234 <222> LOCATION: 1, 7-9, 11, 14, 16, 18, 26, 28, 32, 33, 37, 39, 42, 43, 50,  
 235 51, 53-55, 62, 63, 66-69, 71, 73, 75, 76, 78, 79, 86  
 236 <223> OTHER INFORMATION: n = g, a, c or *t/u* *u*  
 238 <220> FEATURE:  
 239 <221> NAME/KEY: misc\_feature  
 240 <222> LOCATION: 38, 44, 70, 77, 88  
 241 <223> OTHER INFORMATION: r = a or g  
 243 <220> FEATURE:  
 244 <221> NAME/KEY: misc\_feature  
 245 <222> LOCATION: 17, 34, 60, 74

## RAW SEQUENCE LISTING

DATE: 05/07/2004

PATENT APPLICATION: US/10/669,162A

TIME: 14:10:39

Input Set : A:\250060016U2.txt

Output Set: N:\CRF4\05072004\J669162A.raw

246 <223> OTHER INFORMATION: y = c or (t/u) M

248 <400> SEQUENCE: 9

-> 249 ncuaaunngg agnngnynga gggannggcc cnyganrnc cnrgcaacn nnnngugcy 60

250 annccnnnr nnnynnrng auragn 86

252 <210> SEQ ID NO: 10

253 <211> LENGTH: 69

254 <212> TYPE: RNA

255 <213> ORGANISM: Artificial Sequence

257 <220> FEATURE:

258 <223> OTHER INFORMATION: Description of Artificial Sequence:/Note =

259 synthetic construct

261 <220> FEATURE:

262 <221> NAME/KEY: misc\_feature

263 <222> LOCATION: 1, 2, 10-17, 22, 25-31, 34, 40-46, 54-60, 68, 69

264 <223> OTHER INFORMATION: n = g, a, c or (t/u) M

266 <220> FEATURE:

267 <221> NAME/KEY: misc\_feature

268 <222> LOCATION: 5, 18, 67

269 <223> OTHER INFORMATION: r = a or g

271 <220> FEATURE:

272 <221> NAME/KEY: misc\_feature

273 <222> LOCATION: 65

274 <223> OTHER INFORMATION: y = c or (t/u) M

276 <400> SEQUENCE: 10

-> 277 nnucruauan nnnnnnr au anggnnnnn ngunucuacn nnnnnccgu aaannnnnn 60

278 acuaygrnn 69

280 <210> SEQ ID NO: 11

281 <211> LENGTH: 69

282 <212> TYPE: RNA

283 <213> ORGANISM: Artificial Sequence

285 <220> FEATURE:

286 <223> OTHER INFORMATION: Description of Artificial Sequence:/Note =

287 synthetic construct

289 <220> FEATURE:

290 <221> NAME/KEY: misc\_feature

291 <222> LOCATION: 1, 2, 10-17, 22, 25-31, 34, 40-46, 54-60, 68, 69

292 <223> OTHER INFORMATION: n = g, a, c or (t/u) M

294 <220> FEATURE:

295 <221> NAME/KEY: misc\_feature

296 <222> LOCATION: 5, 18, 67

297 <223> OTHER INFORMATION: r = a or g

299 <220> FEATURE:

300 <221> NAME/KEY: misc\_feature

301 <222> LOCATION: 65

302 <223> OTHER INFORMATION: y = c or (t/u) M

304 <400> SEQUENCE: 11

-> 305 nnucruauan nnnnnnr au anggnnnnn ngunucuacn nnnnnccgu aaannnnnn 60

306 auuaygrnn 69

308 <210> SEQ ID NO: 12

FYI

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

RAW SEQUENCE LISTING ERROR SUMMARY  
 PATENT APPLICATION: US/10/669,162A

DATE: 05/07/2004  
 TIME: 14:10:40

Input Set : A:\250060016U2.txt  
 Output Set: N:\CRF4\05072004\J669162A.raw

Base Note:

One or more n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> <223> fields of each sequence which presents at least one n or Xaa.

I# : 3; N Pos. 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169  
 I# : 3; N Pos. 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184  
 I# : 3; N Pos. 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199  
 I# : 3; N Pos. 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214  
 I# : 3; N Pos. 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229  
 I# : 3; N Pos. 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240  
 I# : 5; N Pos. 39, 40, 41, 42, 43, 44, 45, 150, 151, 152, 153, 154, 155, 156  
 I# : 6; N Pos. 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 18, 19, 20, 24, 25, 26, 29, 30, 33, 34, 35, 38, 40, 41, 47  
 I# : 6; N Pos. 50, 54, 55, 56, 58, 59, 60, 66, 75, 76, 77, 78, 79, 85, 89, 93, 97  
 I# : 7; N Pos. 1, 2, 3, 4, 5, 8, 15, 17, 18, 19, 20, 21, 22, 23, 24, 30, 31, 32, 33, 34, 36, 38  
 I# : 7; N Pos. 39, 40, 41, 42, 43, 45, 46, 47, 56  
 I# : 8; N Pos. 11, 17, 20, 25, 36, 37, 46, 47, 48, 58, 61, 77, 78, 79  
 I# : 9; N Pos. 1, 7, 8, 9, 10, 14, 16, 18, 25, 26, 32, 33, 37, 39, 40, 48, 50, 51, 52, 53, 54  
 I# : 9; N Pos. 55, 62, 63, 66, 67, 68, 69, 71, 72, 73, 75, 76, 78, 79, 86  
 I# : 10; N Pos. 1, 2, 10, 11, 12, 13, 14, 15, 16, 17, 20, 25, 26, 27, 28, 29, 30, 31, 34, 40  
 I# : 10; N Pos. 41, 42, 43, 44, 45, 46, 54, 55, 56, 57, 58, 59, 60, 68, 68  
 I# : 11; N Pos. 1, 2, 10, 11, 12, 13, 14, 15, 16, 17, 22, 25, 26, 27, 28, 29, 30, 31, 34, 40  
 I# : 11; N Pos. 41, 42, 43, 44, 45, 46, 54, 55, 56, 57, 58, 59, 60, 68, 69  
 I# : 12; N Pos. 1, 13, 14, 15, 16, 17, 18, 20, 21, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 39  
 I# : 12; N Pos. 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 59, 60, 61, 62, 63, 64  
 I# : 12; N Pos. 65, 66, 67, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93  
 I# : 12; N Pos. 94, 95, 96, 97, 98, 99, 100, 101, 107, 108, 109, 110, 111, 112, 113, 114  
 I# : 12; N Pos. 115, 116, 117, 118, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131  
 I# : 12; N Pos. 132, 139, 145, 151  
 I# : 15; N Pos. 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52  
 I# : 15; N Pos. 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72  
 I# : 15; N Pos. 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83  
 I# : 16; N Pos. 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52  
 I# : 16; N Pos. 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72  
 I# : 16; N Pos. 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83  
 I# : 17; N Pos. 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34  
 I# : 17; N Pos. 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54  
 I# : 17; N Pos. 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74  
 I# : 17; N Pos. 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94  
 I# : 17; N Pos. 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110  
 I# : 17; N Pos. 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123  
 I# : 18; N Pos. 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 23, 25, 26, 27, 28, 29, 30, 31  
 I# : 18; N Pos. 32, 40, 41, 42, 44, 46, 47, 48, 49, 50, 51, 53, 54, 55, 64, 65, 66  
 I# : 19; N Pos. 12, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 42, 43, 44  
 I# : 19; N Pos. 45, 46, 47, 48, 49, 50, 51  
 I# : 20; N Pos. 12, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29  
 I# : 21; N Pos. 12, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38  
 I# : 21; N Pos. 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58  
 I# : 21; N Pos. 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78



RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 05/07/2004  
PATENT APPLICATION: US/10/669,162A      TIME: 14:10:40

Input Set : A:\250060016U2.txt  
Output Set: N:\CRF4\05072004\J669162A.raw

{#:21; N Pos. 79,89,94  
{#:22; N Pos. 19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38  
{#:22; N Pos. 39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58  
{#:22; N Pos. 59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78  
{#:22; N Pos. 79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98  
{#:22; N Pos. 99,100,101,102,103,104,105,106,107,108,109,110,111,112,113  
{#:22; N Pos. 114,115,116,117,118,119,120,121,122,123,124,125,126,127,128

## VERIFICATION SUMMARY

DATE: 05/07/2004

PATENT APPLICATION: US/10/669,162A

TIME: 14:10:40

Input Set : A:\250060016U2.txt

Output Set: N:\CRF4\05072004\J669162A.raw

70 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:120  
341 Repeated in SeqNo=3  
108 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
341 Repeated in SeqNo=5  
144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
341 Repeated in SeqNo=6  
178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
341 Repeated in SeqNo=8  
249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
341 Repeated in SeqNo=9  
277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
341 Repeated in SeqNo=10  
305 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
341 Repeated in SeqNo=11  
349 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
341 Repeated in SeqNo=12  
384 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
341 Repeated in SeqNo=15  
399 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
341 Repeated in SeqNo=16  
414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
341 Repeated in SeqNo=17  
444 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0  
341 Repeated in SeqNo=18  
458 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
472 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0  
486 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0  
341 Repeated in SeqNo=21  
501 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
341 Repeated in SeqNo=22  
517 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
341 Repeated in SeqNo=23  
533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
341 Repeated in SeqNo=24  
548 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0  
341 Repeated in SeqNo=25  
563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
341 Repeated in SeqNo=26  
578 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0  
341 Repeated in SeqNo=27  
594 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0  
341 Repeated in SeqNo=28  
609 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
341 Repeated in SeqNo=29  
625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0  
341 Repeated in SeqNo=30  
641 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0

VERIFICATION SUMMARY

DATE: 05/07/2004

PATENT APPLICATION: US/10/669,162A

TIME: 14:10:40

Input Set : A:\250060016U2.txt

Output Set: N:\CRF4\05072004\J669162A.raw

341 Repeated in SeqNo=31

557 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0

1713 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:98